What is claimed is:

1. A composition of matter of the formula

$$(X^1)_a\text{-}F^1\text{-}(X^2)_b$$

and multimers thereof, wherein:

F^1 is an Fc domain;

X^1 and X^2 are each independently selected from $-(L^1)_c\text{-}P^1$, $-(L^1)_c\text{-}P^1\text{-}(L^2)_d\text{-}P^2$, $-(L^1)_c\text{-}P^1\text{-}(L^2)_d\text{-}P^2\text{-}(L^3)_e\text{-}P^3$, and $-(L^1)_c\text{-}P^1\text{-}(L^2)_d\text{-}P^2\text{-}(L^3)_e\text{-}P^3\text{-}(L^4)_f\text{-}P^4$

P^1, P^2, P^3, and P^4 are each independently sequences of pharmacologically active peptides;

L^1, L^2, L^3, and L^4 are each independently linkers; and

a, b, c, d, e, and f are each independently 0 or 1, provided that at least one of a and b is 1.

2. The composition of matter of Claim 1 of the formulae

$$X^1\text{-}F^1$$

or

$$F^1\text{-}X^2.$$

3. The composition of matter of Claim 1 of the formula

$$F^1\text{-}(L^1)_c\text{-}P^1.$$

4. The composition of matter of Claim 1 of the formula

$$F^1\text{-}(L^1)_c\text{-}P^1\text{-}(L^2)_d\text{-}P^2.$$

5. The composition of matter of Claim 1 wherein F^1 is an IgG Fc domain.

6. The composition of matter of Claim 1 wherein F^1 is an IgG1 Fc domain.

7. The composition of matter of Claim 1 wherein F^1 comprises the sequence of SEQ ID NO: 2.

8. The composition of matter of Claim 1 wherein X^1 and X^2 comprise an IL-1 antagonist peptide sequence.

9. The composition of matter of Claim 8 wherein the IL-1 antagonist peptide sequence is selected from SEQ ID NOS: 212, 907, 908, 909, 910, 917, and 979.

10. The composition of matter of Claim 8 wherein the IL-1 antagonist peptide sequence is selected from SEQ ID NOS: 213 to 271, 671 to 906, 911 to 916, and 918 to 1023.

11. The composition of matter of Claim 8 wherein F^1 comprises the sequence of SEQ ID NO: 2.

12. The composition of matter of Claim 1 wherein X^1 and X^2 comprise an EPO-mimetic peptide sequence.

13. The composition of matter of Claim 12 wherein the EPO-mimetic peptide sequence is selected from Table 5.

14. The composition of matter of Claim 12 wherein F^1 comprises the sequence of SEQ ID NO: 2.

15. The composition of matter of Claim 12 comprising a sequence selected from SEQ ID NOS: 83, 84, 85, 124, 419, 420, 421, and 461. .

16. The composition of matter of claim 12 comprising a sequence selected from SEQ ID NOS: 339 and 340.

17. The composition of matter of Claim 12 comprising a sequence selected from SEQ ID NOS: 20 and 22.

18. The composition of matter of Claim 3 wherein P^1 is a TPO-mimetic peptide sequence.

19. The composition of matter of Claim 18 wherein P^1 is a TPO-mimetic peptide sequence selected from Table 6.

20. The composition of matter of Claim 18 wherein F^1 comprises the sequence of SEQ ID NO: 2.

21. The composition of matter of Claim 18 having a sequence selected from SEQ ID NOS: 6 and 12.

22. A DNA encoding a composition of matter of any of Claims 1 to 21.

23. An expression vector comprising the DNA of Claim 22.

24. A host cell comprising the expression vector of Claim 23.

25. The cell of Claim 24, wherein the cell is an E. coli cell.

26. A process for preparing a pharmacologically active compound, which comprises

a) selecting at least one randomized peptide that modulates the activity of a protein of interest; and

b) preparing a pharmacologic agent comprising at least one Fc domain covalently linked to at least one amino acid sequence of the selected peptide or peptides.

27. The process of Claim 26, wherein the peptide is selected in a process comprising screening of a phage display library, an E. coli display library, a ribosomal library, or a chemical peptide library.

28. The process of Claim 26, wherein the preparation of the pharmacologic agent is carried out by:

a) preparing a gene construct comprising a nucleic acid sequence encoding the selected peptide and a nucleic acid sequence encoding an Fc domain; and

b) expressing the gene construct.

29. The process of Claim 26, wherein the gene construct is expressed in an E. coli cell.

30. The process of Claim 26, wherein the protein of interest is a cell surface receptor.

31. The process of Claim 26, wherein the protein of interest has a linear epitope.

32. The process of Claim 26, wherein the protein of interest is a cytokine receptor.

33. The process of Claim 26, wherein the peptide is an EPO-mimetic peptide.

34. The process of Claim 26, wherein the peptide is a TPO-mimetic peptide.

35. The process of Claim 26, wherein the peptide is an IL-1 antagonist peptide.

36. The process of Claim 26, wherein the peptide is an MMP inhibitor peptide or a VEGF antagonist peptide.

37. The process of Claim 26, wherein the peptide is a TNF-antagonist peptide.

38. The process of Claim 26, wherein the peptide is a CTLA4-mimetic peptide.

39. The process of Claim 26, wherein the peptide is selected from Tables 4 to 20.

40. The process of Claim 26, wherein the selection of the peptide is carried out by a process comprising:

a) preparing a gene construct comprising a nucleic acid sequence encoding a first selected peptide and a nucleic acid sequence encoding an Fc domain;

b) conducting a polymerase chain reaction using the gene construct and mutagenic primers, wherein

i) a first mutagenic primer comprises a nucleic acid sequence complementary to a sequence at or near the 5′ end of a coding strand of the gene construct, and

ii) a second mutagenic primer comprises a nucleic acid sequence complementary to the 3′ end of the noncoding strand of the gene construct.

41. The process of Claim 26, wherein the compound is derivatized.

42. The process of Claim 26, wherein the derivatized compound comprises a cyclic portion, a cross-linking site, a non-peptidyl

linkage, an N-terminal replacement, a C-terminal replacement, or a modified amino acid moiety.

43. The process of Claim 26 wherein the Fc domain is an IgG Fc domain.

44. The process of Claim 26, wherein the vehicle is an IgG1 Fc domain.

45. The process of Claim 26, wherein the vehicle comprises the sequence of SEQ ID NO: 2.

46. The process of Claim 26, wherein the compound prepared is of the formula

$$(X^1)_a\text{-}F^1\text{-}(X^2)_b$$

and multimers thereof,wherein:

F^1 is an Fc domain;

X^1 and X^2 are each independently selected from $-(L^1)_c\text{-}P^1$, $-(L^1)_c\text{-}P^1\text{-}(L^2)_d\text{-}P^2$, $-(L^1)_c\text{-}P^1\text{-}(L^2)_d\text{-}P^2\text{-}(L^3)_e\text{-}P^3$, and $-(L^1)_c\text{-}P^1\text{-}(L^2)_d\text{-}P^2\text{-}(L^3)_e\text{-}P^3\text{-}(L^4)_f\text{-}P^4$

P^1, P^2, P^3, and P^4 are each independently sequences of pharmacologically active peptides;

L^1, L^2, L^3, and L^4 are each independently linkers; and

a, b, c, d, e, and f are each independently 0 or 1, provided that at least one of a and b is 1.

47. The process of Claim 46, wherein the compound prepared is of the formulae

$$X^1\text{-}F^1$$

or

$$F^1\text{-}X^2$$

48. The process of Claim 46, wherein the compound prepared is of the formulae

$$F^1\text{-}(L^1)_c\text{-}P^1$$

or

$$F^1\text{-}(L^1)_c\text{-}P^1\text{-}(L^2)_d\text{-}P^2.$$

49. The process of Claim 46, wherein F^1 is an IgG Fc domain.

50. The process of Claim 46, wherein F^1 is an IgG1 Fc domain.

51. The process of Claim 46, wherein F^1 comprises the sequence of SEQ ID NO: 2.